

CLAIMS

1. A golf club head comprising a part made of a martensitic iron alloy which has: a nickel (Ni) content of from 9.0 to 12.0 weight %; a chromium (Cr) content of from 11.0 to 12.5 weight %; a titanium (Ti) content of from 1.5 to 1.8 weight %; a molybdenum (Mo) content of from 0.75 to 1.2 weight %; a carbon (C) content of not more than 0.05 weight %; a phosphorus (P) content of not more than 0.015 weight %; a silicon (Si) content of not more than 0.25 weight %; a magnesium (Mg) content of not more than 0.25 weight %; and a sulfur (S) content of not more than 0.01 weight %.
2. A golf club head according to claim 1, wherein the ratio (X/Y) of the nickel (Ni) content X to the titanium (Ti) content Y is in a range of from 5.5 to 7.5.
3. A golf club head according to claim 1 or 2, wherein said martensitic iron alloy has martensitic structure which makes up 90% or more of the total.
4. A golf club head according to claim 1, wherein said part is a casting of the martensitic iron alloy.
5. A golf club head according to claim 1 or 4, which is a wood-type hollow club head comprising a platy face portion, and said part forms the face portion.
6. A method of manufacturing a golf club head composed of metal parts, the methods comprising

making at least one of the metal parts by casting an iron alloy, wherein the iron alloy has: a nickel (Ni) content of from 9.0 to 12.0 weight %; a chromium (Cr) content of from 11.0 to 12.5 weight %; a titanium (Ti) content of from 1.5 to 1.8 weight %; a molybdenum (Mo) content of from 0.75 to 1.2 weight %; a carbon (C) content of not more than 0.05 weight %; a phosphorus (P) content of not more than 0.015 weight %; a silicon (Si) content of not more than 0.25 weight %; a magnesium (Mg) content of not more than 0.25 weight %; and a sulfur (S) content of not more than 0.01 weight %,

making thermal treatments on the casted part so that the iron alloy has martensitic structure which makes up 90% or more of the total,

said thermal treatments including:

a solution heat treatment made on said part casted at a temperature of from 980 to 1050 degrees C and accompanied by subsequent quenching;

deep cooling made immediately after the quenching; and

an aging treatment made at a temperature of from 518 to 558 degrees C.